Contents

Work hardening of mechanically alloyed Fe–Y_2O_3 alloys 1
J. B. Kosco and D. A. Koss (University Park, PA, USA)

The effect of homogenization and precipitation treatments on the extrudability and ambient-temperature mechanical properties of aluminum alloy AA2024 9
M. E. Kassner, X. Li (Corvallis, OR, USA) and H. J. McQueen (Montreal, Que., Canada)

Fracture behaviour of an aluminide coating on a single crystal nickel base superalloy 19
T. C. Totemeier, W. F. Gale and J. E. King (Cambridge, UK)

Creep of copper in the temperature range 423–623 K 27
H. D. Chandler (Johannesburg, South Africa)

Predicting slip behavior in alloys containing shearable and strong particles 33
C. P. Blankenship, Jr., E. Hornbogen and E. A. Starke, Jr. (Charlottesville, VA, USA)

Elastic stresses in anisotropic bicrystals 43
P. Peralta, A. Schober and C. Laird (Philadelphia, PA, USA)

The effects of small titanium additions on the mechanical properties and the microstructures of controlled rolled niobium-bearing HSLA plate steels 53
H. Kejian and T. N. Baker (Glasgow, UK)

Effect of grain size and intergranular stresses on the cyclic behaviour of a ferritic steel 67
L. C. Rolim Lopes and J. Charlier (Brussels, Belgium)

Effect of magnesium on mechanical properties of alumina-fiber-reinforced aluminum matrix composites formed by pressure infiltration casting 79
T. M. Liu and C. G. Chao (Hsinchu, Taiwan)

Mechanical properties and microstructural evolution of a cobalt base alloy coating 85
P. Revel, M. Clavel, G. Beranger (Compiègne, France) and P. Pilvin (Evry, France)

Pressure die cast graphite dispersed Al–Si–Mg alloy matrix composites 93
U. T. S. Pillai, B. C. Pai, V. S. Kelukutty and K. G. Satyanarayana (Trivandrum, India)

On the kinetical interaction of high-temperature deformation mechanisms 99
M. G. Zelin and A. K. Mukherjee (Davis, CA, USA)

Monte Carlo analysis of short-range order in nitrogen-strengthened Fe–Ni–Cr–N austenitic alloys 103
M. Grujicic, X. W. Zhou (Clemson, SC, USA) and W. S. Owen (Cambridge, MA, USA)

Effect of molybdenum on the resistance to H_2S of high sulphur microalloyed steels 111
K. Ravi, V. Ramaswamy (Ranchi, India) and T. K. G. Namboodhiri (Varanasi, India)

Elaboration and characterization of new low temperature shape memory Cu–Al–Be alloys 119
S. Belkahla, H. Flores Zuñiga and G. Guenin (Villeurbanne, France)

The irreversible deformation of a duplex stainless steel under thermal cycling 125
T. Siegmund, E. Werner and F. D. Fischer (Leoben, Austria)

Microstructure in rapidly solidified Al–Ti alloys 135
A. Majumdar and B. C. Muddle (Clayton, Vic., Australia)

Reactions in Al_2O_3–Mg metal matrix composites during prolonged heat treatment at 400, 550 and 600 °C 149
B. Hallstedt, Z. K. Liu and J. Ågren (Stockholm, Sweden)

CONTENTS (*continued*)

Stability bifurcation against coarsening in elastically constrained many-particle systems. 159
T. Miyazaki and T. Koyama (Nagoya, Japan)

Microstructural evolution and thermal stability of precipitation-strengthened Cu–8Cr–4Nb alloy 167
K. R. Anderson, J. R. Groza (Davis, CA, USA), R. L. Dreshfield and D. Ellis (Cleveland, OH, USA)

LETTERS

Structures obtained by mechanical fragmentation of glass plates L1
Z. Néda, Á. Mócsy and B. Bakó (Cluj, Romania)

Plasma etching of structural ceramics for microstructural analysis. L5
O. O. Ajayi, R. H. Lee and R. E. Cook (Argonne, IL, USA)

Estimation of energy-dissipative process development during crack propagation in an intermetallic alloy. L9
S. M. Barinov (Moscow, Russian Federation)

Preparation by diffusion bonding and adhesive bonding of aluminum alloy specimens for fracture toughness and fatigue crack growth resistance measurements in different orientations L13
S. Hariprasad, S. M. L. Sastry and K. L. Jerina (St. Louis, MO, USA)

Structure and properties of Fe-based nanocrystalline alloys containing a small amount of transition elements. L17
X. D. Liu, J. T. Wang, Z. Q. Hu and B. Z. Ding (Shenyang, China)

AUTHOR INDEX 177

SUBJECT INDEX 179